# CALIFORNIA STATE SCIENCE FAIR
# 2014 PROJECT SUMMARY

**Name(s)**

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**Project Number**

34906

**Project Title**

## The Green Steam Engine

**Abstract**

**Objectives/Goals**

Can the 2 Cylinders, Green Steam Engine TM be built as easily as stated?
Is this design a viable source of alternative energy?

**Methods/Materials**

1 - 7/8# X 6# steel bolt; 1 - 2# X 1-1/4# X 2# aluminum bar; 1 - flex rod 1/2# X 6#; 1 - 1/2# X 6# steel rod; 2 - 10-32 rod ends; 4 - 3/8# X 15# steel rod; 1 - 1/8# X 12# brass rod; 2 - 1/2# pillow block bearings; 1 - 1/2" X 6# hardened shaft; 1 - 1# X ## bronze bushing; 1 - 3/4# X 2#stainless steel rod; 2 - 5/8# snap rings; 1 - 10mm X 2-1/2# hardened bolt; 2 - 5/8# OD 10 mm ID needle bearings; 2 - 5/16 nuts; 4 - 3/8# nuts; 4 - 3/8# lock washers; 1 - 12" x 24" x 1" board; 1 - 2# X 1-1/4# X 2# aluminum bar; 1 - flex rod ½# X 6#; 1 - 1/2" X 6# steel rod; 2 - 10-32 rod ends (plastic or steel, hobby shop item); 4 - 3/8# X 15# steel rod; 1 - 1/8# X 12# brass rod; 2 - 1/2" pillow block bearings; 1 - 1/2" X 6# hardened shaft; 1 - 1# X 3/4# bronze bushing; 1 - 3/4" X 2# stainless steel rod; 2 - 5/8# snap rings; 1 - 10mm X 2-1/2# hardened bolt; 2 - 5/8# OD 10 mm ID needle bearings; 2 - 5/16 nuts; 4 - 3/8# nuts; 4 - 3/8# lock washers; 1 - 12" x 24" x 1" board.

**Results**

The engine was able to be built as stated.
Numerous parts had to be machined at professional machine shop.
The engine ran well utilizing an air compressor to simulate steam pressure.
It needed little lubricant and the noise and vibration was at a minimum.

**Conclusions/Discussion**

The Green Steam Engine was relatively easy to build with off-the-shelf materials and could be used as alternative power source.

**Summary Statement**

The potential of using the Green Steam Engine as an alternate source for small scale power.

**Help Received**

A professional machine shop fabricated some of my parts.